

B) REMARKS

I. General

Claims 12-13, 24-31 are currently pending in this application, and claims 14-23 have been withdrawn from consideration. The issues in the Final Action are as follows:

- Claims 12-13, 24-25, 30 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,351,359 to Golden (hereinafter *Golden*).
- Claims 26-27 and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Golden* in view of U.S. Patent No. 4,290,123 to Pickens (hereinafter *Pickens*).
- Claims 26-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Golden* in view of JP 6-165336.

Applicant hereby traverses the rejections and requests reconsideration and withdrawal in light of the remarks contained herein.

II. Improper Procedure of Relying upon Abstracts and Foreign Language Documents under M.P.E.P. § 706.02(II)

Pursuant to the Manual of Patent Examining Procedure (M.P.E.P.), “[t]he record must also be clear as to whether the examiner is relying upon the abstract or the full text document to support a rejection.” M.P.E.P. § 706.02(II). The record is not clear whether the Examiner is relying upon only the abstract or the full document for the rejection. The rejection simply states that claims 26-28 are rejected as being unpatentable over *Golden* in view of JP 6-165336. In responding to the rejections, Applicant assumes that the Examiner is relying only upon the provided translation of the abstract of JP 6-165336. Applicant respectfully requests the Examiner clarify for the record whether the abstract or full text document of JP 6-165336 is relied upon in accordance with M.P.E.P. § 706.02(II).

III. Claim Rejections

A. 35 U.S.C. § 103(a) Rejection

Claims 12-13, 24-25, 30, and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Golden*. Applicant respectfully traverses the rejection.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner cannot satisfy this burden through “mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ 2d 1385, 1396 (2007) (citing *In re Kahn*, 441 F.3d 977, 988, 78 U.S.P.Q.2d 1329, 1336 (Fed. Cir. 2006)). In *KSR*, the United States Supreme Court affirmed the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which must be considered in applying the statutory test: (1) determining of the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the pertinent art, and (4) evaluate evidence of secondary considerations. Therefore, the rejection must address all the limitations of the claims. Moreover, the Examiner must provide analysis supporting any rationale why a person skilled in the art would combine the prior art to arrive at the claimed invention, and “[such] analysis should be made explicit,” *KSR*, 127 S.Ct. at 1741. The Examiner has failed to at least show that the pending claims are obvious under the framework set out in *Graham*. That is, the Examiner has failed to address all the limitations of the claims and provide explicit analysis supporting any rationale that a person skilled in the art would combine the cited prior art. Therefore, Applicant requests that such rejections be withdrawn.

1. Failure to Satisfy Every Claim Limitation

a. Independent claims 12, 30, and 31

Claim 12 recites, in part, “a cleaning appliance . . . and a hydrodynamic drag structure” (emphasis added). Claims 30 and 31 recite similar limitations. As can be best understood, the Examiner equates cleaning device 20 of *Golden* to the recited cleaning appliance. The Examiner, however, fails to identify the equivalent structure for the recited

“hydrodynamic drag structure.” Instead, the Examiner attempts to remedy this deficiency by merely stating that “any structure can be a hydrodynamic drag structure.” See Final Action, page 3. This statement does not satisfy the Examiner’s burden of establishing a *prima facie* case of obviousness. While “any structure” may be “hydrodynamic,” the Examiner still must identify in the prior art the recited “hydrodynamic drag structure,” rather than dismiss the explicitly recited feature with a mere statement of opinion. If the Examiner designates *Golden*’s cleaning device 20 as the recited “cleaning appliance,” it cannot again serve as the separately recited “hydrodynamic drag structure.” The Examiner must identify another structure to satisfy this limitation. Otherwise, the Examiner is mischaracterizing the language of claims 12, 30, and 31. Therefore, *Golden* does not satisfy the recited limitation of “a hydrodynamic drag structure,” and other references are not relied upon to do so. Accordingly, neither *Golden* nor any other cited references satisfy all limitations of claims 12, 30, and 31.

Claims 12, 30, and 31 further recite “towing the seismic streamer” and “creating a drag with said hydrodynamic drag structure . . . said drag having the effect of moving the cleaning appliance along the seismic streamer.” (emphasis added). The Examiner appears to rely on *Golden*’s disclosure that its cleaning method can be performed during retrieval of anchor 14 to satisfy these limitations. See Final Action, page 3. This reliance, however, is misplaced. For instance, Figs. 1 and 6, column 4 lines 39-44, column 5, line 64 to column 6, line 10 of *Golden* clearly describe the cleaning device 20 being moved downwardly along the anchor chain 14 by the gravitational forces attributable to weight 29. In other words, the downward movement of *Golden*’s cleaning device 20 along the longitudinal axis of anchor chain 14 or any other similar items is due to the pull of gravity on weight 29 attached to cleaning device 20 via weight line 28. Also, *Golden*’s cleaning system relies on the physical force of pulling to retrieve the cleaning device 20 upward by “inboard pulling of retrieving line 26.” See *id.* column 6, lines 1-3. Further, another embodiment of *Golden* shows a crew member 51 manually reciprocating a boat hook 52 that is coupled directly to the cleaning device 20. See *Golden* column 6, lines 27. As such, *Golden* does not contemplate using hydrodynamic drag to move its cleaning device 20 along anchor chain 14 or any other similar items.

Moreover, even if the method is performed while the anchor line is being retrieved, there is nothing in *Golden* to suggest that the asserted “inherent” drag is sufficient force to move cleaning device 20 downward for cleaning purposes. The Examiner has not provided support or evidence that the “inherent” drag would be sufficient to perform such task. In fact, *Golden*’s disclosure clearly points to a system that relies on gravitational force, physical force of pulling, or manual pushing and pulling to move its cleaning device, and not hydrodynamic drag as disclosed by claims 12, 30, and 31. Thus, “[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.” *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art) (emphasis added); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981); M.P.E.P. § 2112(IV). Further, inherency “may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted); M.P.E.P. § 2112(IV). Therefore, the mere assertion that the drag on cleaning device 20 alone can move it along the anchor chain is insufficient to meet the Examiner’s burden.

Further, as best can be understood, the Examiner appears to be equating the retrieval of the anchor or similar items to the recited limitation of “towing the seismic streamer.” See Final Action, page 3. This is an improper interpretation of claims 12, 30, and 31. Pursuant to the M.P.E.P., the claims must be read in light of the specification. See M.P.E.P. § 2111. In addition, the words of a claim must be given their “plain meaning.” When read in light of the specification and giving the words their plain meaning, one ordinarily skilled in the art would not equate the vertical or substantially vertical retrieval of an anchor line or ropes to the recited “towing the seismic streamers” as the two are distinct and different from one another. By equating the retrieval of the anchor chain to limitation of “towing the seismic streamer,” the Examiner has effectively rewritten the language of claims 12, 30, and 31.

That is, the act of retrieving the anchor line or similar items in *Golden* describes a line that is vertical or substantially vertical that is reciprocated inward towards the vessel, shortening the length of the anchor chain or rope until the end of the chain or rope is

retrieved. On the other and, “towing” describes an act of pulling something in a substantially horizontal direction for a period of time without affecting the length of the thing that is towed. For example, the American Heritage® Dictionary of the English Language (2000) defines “tow” as “To draw or pull behind by a chain or line: *a tugboat towing a barge*.” As such, pulling behind by a chain or line is clearly different than pulling the chain or line itself, which is what the Examiner has effectively interpreted the claims to recite. Accordingly, *Golden* does not disclose of “towing,” let alone the recited “towing the seismic streamer,” which can be several kilometers long and are generally towed horizontally by a vessel.

Therefore, the Examiner has not pointed to any teaching in *Golden* or any other references that actually discloses “towing” of any sort. The Examiner has only indicated that there is drag on *Golden*’s cleaning device 20 when it is being moved up and down. The Examiner, however, still fails to show how *Golden* satisfies the recited limitation of the cleaning appliance being moved by hydrodynamic drag, let alone that drag is created by a separate hydrodynamic drag structure which the Examiner has not identified. Therefore, the Examiner has not met his initial burden of establishing a *prima facie* case of obviousness.

Therefore, at best, *Golden* discloses retrieving the seismic streamer from the ocean in a substantially vertical position with the attached cleaning device 20, which is moved downward by gravitational force and upward by inward pulling of retrieval line 26 or manually manipulating the cleaning device with a boat hook while the seismic streamer remains stationary and secured to the sea floor. Accordingly, *Golden* does not disclose all limitations of claims 12, 30, and 31, and other cited references are not relied upon to do so. As such, neither *Golden* nor any other cited references satisfy all limitations of claims 12, 30, and 31.

Further, independent claim 31 also recites “a towed seismic streamer equipped with appendages for controlling the depth of the streamer” and “maintaining the cleaning appliance . . . in an approximately constant orientation in relation to the longitudinal axis of the streamer, astride said appendages” (emphasis added). The Examiner identified any references that satisfy the recited limitation. Instead, the Examiner merely provides conclusory statements that it would have been obvious to use the method of *Golden* to clean a towed seismic streamer having an appendage. See Final Action, page 4. Applicant believes that

such statement is Official Notice by the Examiner. As such, it is believed that the cleaning method of *Golden* being used to clean seismic streamers with appendages is not capable of instant and unquestionable demonstration as being well-known, as required of an Official Notice by M.P.E.P. § 2144.03(A), citing *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970).

Alternatively, such an assertion without documentary evidence may be appropriate if the Office Action provides “specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge.” M.P.E.P. § 2144.03(B), citing, *In re Soli*, 317 F.2d 941, 946, 137 USPQ 797, 801 (CCPA 1963), and *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 241 (CCPA 1943). However, because the above-quoted statement is merely an assertion, rather than reasoning, the Official Notice must fail. Accordingly, *Golden* alone does not meet the recited features of claim 31. While Applicant has traversed the contents of the Official Notice, Applicant further respectfully requests that the Examiner provide an affidavit or publication supporting such Notice under M.P.E.P. § 2144.03(C) if the Examiner believes such features are well-known.

Further, even if Applicant agrees with the Examiner, which Applicant does not, *Golden* still does not disclose the recited limitations of the appendages “for controlling the depth of the streamer” and “maintaining the cleaning appliance . . . astride said appendages.” Accordingly, *Golden* does not disclose all limitations of claim 31, and other cited references are not relied upon to do so. As such, neither *Golden* nor any other cited references satisfy all limitations of claim 31.

b. Dependent claims

Dependent claims 13 and 24-29 depend directly or indirectly from claim 12 and inherit every limitation therefrom. As shown above, the Examiner’s rejection fails to satisfy every limitation of independent claim 12. Therefore, dependent claims 13 and 24-29 are patentable at least by virtue of their dependency from independent claim 12. In addition, the dependent claims set forth additional features making them patentable in their own right.

For instance, with respect to claim 13, the Office Action mischaracterizes *In re Boesch* by asserting that the recited limitation would have been obvious because “one skilled

in the art would modify different variables to achieve optimum result.” *See* Final Action, page 4. The Manual of Patent Examination, however, clearly emphasizes that “a particular parameter must first be recognized as a result-effective variable . . . before the determination of optimum or workable ranges . . . might be characterized as routine experimentation.” M.P.E.P. § 2144.05(II)(B). The Examiner has not provided any evidence to indicate the parameter as a recognized result-effective variable. Further, the Examiner has not cited to any references to satisfy this limitation. Consequently, the rejection fails to show that claim 13 is obvious.

Dependent claim 26 recites, in part, “at least one pair of members adapted to contact at low friction” (emphasis added). The Examiner relies on *Pickens* and JP 6-165336, alternatively, to reject this claim. The Examiner, however, has failed to identify any portions in *Pickens* that satisfy this limitation. Instead, the cited portion of *Pickens* merely discusses the general shape and composition of its rollers and does not describe the friction of the contact by its rollers. Further, with respect to JP 6-165336, this reference actually requires brushes 6a and 6b, which the Examiner appears to equate to the recited “members” (*see* Final Action, page 6), to have a high friction contact with the high-voltage cable to grind away the dirt on the cable. This disclosure is clearly contrary to the claim language. Accordingly, neither *Pickens* nor JP 6-165336 satisfies all the limitations of claim 26 and other cited references are not relied upon to do so. As such, the rejection fails to show that claim 26 is obvious.

Dependent claim 28 recites, in part, “said brushes being respectively driven by said rollers engaging the seismic streamers.” As can be best understood, the Examiner points to number 6 in Fig. 1 of JP 6-165336 to serve both as the rollers and brushes. *See* Final Action, page 6. This, however, is a mischaracterization of claim 28, which recites that the rollers are separate from the brushes and the rollers themselves engage the seismic streamer. As such, if the Examiner equates brushes 6a and 6b of Fig. 1 of JP 6-165336 to the recited rollers, these brushes (6a and 6b) cannot be used again to satisfy the recited brushes. Further, it is clear from JP 6-165336 that the brushes are designated by 6a and 6b while the rollers are designated by 5a and 5b. As can be seen, rollers 5a and 5b do not engage the high-voltage cable 10, rather, only brushes 6a and 6b do. Accordingly, JP 6-165336 does not satisfy all

the limitations of claim 28 and other cited references are not relied upon to do so. As such, the rejection fails to show that claim 28 is obvious.

Dependent claim 29 recites, in part, “moving [the members] away from said contact so as to allow clearance of projects present along the streamer.” The Examiner has failed to identify any portions in *Golden* or in any other references that satisfy this limitation. See Final Action, page 5. As such, the rejection fails to show that claim 29 is obvious.

2. Lack of Rationale and Suggestion To Combine References

a. Dependent claims 26-27 and 29

Claims 26-27 and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Golden* in view of *Pickens*. Claims 26-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Golden* in view of JP 6-165336. Applicant respectfully traverses the rejection.

Applicant notes that the Supreme Court indicates that there should be an “explicit” analysis regarding “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ 2d 1385, 1396 (2007). Consistent with the foregoing, the guidelines for determining obviousness promulgated by the Patent Office require the Examiner to “explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International v. Teleflex Inc.*, 72 Fed. Reg. 57526, 57528 (Oct. 10, 2007). Thus, it is “important [for an examiner] to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *Id.*

The present rejection fails to comply with the above-articulated rules. That is, the Examiner does not provide any “explicit” analysis as to the rationale supporting the rejection. Instead, the Examiner simply alleges that it would have been obvious to modify the method of *Golden* as taught by either *Pickens* or JP 6-165336 in order to prevent the cleaning device

from releasing the cable during cleaning operation. Such a statement is circular and does not provide any explanation as to why the identified differences between the applied art and the claimed invention would have been obvious to one of ordinary skill in the art. Consequently, the Examiner merely provides conclusory statements without any supporting analysis that details any articulated reasoning. In general, Applicant notes that *Golden* already provides an efficient cleaning method, in fact that is the purpose of *Golden*. Further, *Golden* specifically discloses a mechanism for keeping the cleaning device on the anchor chain or similar item by describing that its cleaning device 20 has anchor chain guides 35 and 36 to “insure that the cleaning device 20 remains on the anchor chain.” See *Golden* column 4, lines 54-56, and column 5, lines 35-37. As such, there is no need to combine *Golden* with *Pickens* or JP 6-165336 to achieve this result.

In addition, neither *Golden* nor *Pickens* nor JP 6-165336 suggests the desirability to combine the *Golden* and *Pickens* or *Golden* and JP 6-165336. *Golden* is concerned with cleaning an anchor chain where the disclosed cleaning device already has its own guidance and positioning mechanism. On the other hand, *Pickens* discloses a method and system to move along a towed array of hydrophones to calibrate such hydrophones. JP 6-165336, which describes wire brushes to grind and remove dirt from high-voltage cables, is not even remotely related to the technical field disclosed by *Golden*. Accordingly, one skilled in the art would not be motivated to combine these references from such different technological fields.

Further, Applicant respectfully points out that the Examiner’s proposed combination is inappropriate insomuch as it would change the principle operation of *Golden*. “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” *In re Ratti*, 270 F.2d 810 (C.C.P.A. 1959); M.P.E.P. §. 2143.01(VI).

As relating to *Pickens*, *Golden*’s cleaning device already has anchor chain guides 35 and 36 to position and guide cleaning device 20. The combination of *Golden* and *Pickens* would result in a substantial modification of *Golden*’s cleaning device 20 because the combination would require the removal of these anchor chain guides along with the attached

brushes, which would render *Golden's* cleaning device 20 inoperative. Further, *Pickens* is concerned with calibrating a towed hydrophone array. Consequently, it is absurd to think that a cleaning device, already with its own positioning and guidance mechanism, would be more efficient if it is modified to have rollers instead of these mechanisms and the attached brushes. As such, *Golden's* cleaning device 20 would require complete and total reconfiguration to incorporate the features of *Pickens*, which would render it inoperable. Therefore, the suggested combination of *Golden* and *Pickens* is improper and the rejection of claims 26-27 and 29 should be withdrawn.

Similarly with respect to JP 6-165336, the combination of *Golden* and JP 6-165336 would result in a substantial modification of *Golden's* cleaning device 20 because the combination would require adding the wire brushes 6a and 6b and the disclosed power supply to drive these brushes. As such, *Golden* must be modified to accommodate and protect this power supply as it travels in the sea water. Further, the combination reconfigures *Golden* by adding wire brushes which does not provide a 360 degrees of brushing of cleaning device 20 of *Golden*. As such, *Golden's* cleaning device 20 would require complete and total reconfiguration. Therefore, the suggested combination of *Golden* and JP 6-165336 is improper and the rejection of claims 26-28 should be withdrawn.

C) CONCLUSION

In light of the arguments made herein, applicants respectfully assert that all of the Examiner's rejections have been overcome and that the pending claims are in condition for allowance. From the foregoing, applicants respectfully request reconsideration and further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is hereby earnestly solicited. Accordingly, Applicants request that letters patent be issued on the application. If any requirements remain, please contact the undersigned for quick resolution. This is intended to be a complete response.

Applicants believe that no fees are due or associated with the filing of this document. However, if Applicants are in error, the Commissioner is hereby authorized to draw any additional fees associated with this filing from Deposit Account No. 06-2375, under Order No. HO-P03716US0/11000092, from which the undersigned is authorized to draw.

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Respectfully submitted,

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